

REMARKS

This Communication is submitted in response to the October 28, 2005 Office Action issued in connection with the above-identified patent application. The claims pending in this application are claims 1-8, with claims 9-11 being previously withdrawn. The sole independent claim is claim 1. Applicant respectfully request that the Examiner reconsider the rejection to the claims based on the following remarks.

The subject invention is directed to a method of marking a surface of a solid substrate with particles of a printing medium. As stated on page 1, lines 29-31 of the application, the term "surface marking" is defined as "a form of marking which modifies or alters the surface of the substrate into the latter but over a very limited thickness, corresponding to simple abrasion." Claim 1 of the application recites a method of marking as a two-step process: (1) exposing a substrate to monochromatic light; and (2) projecting particles of a printing medium over the exposed portion of the substrate. In particular, claim 1 recites the step of exposing the substrate "to coherent monochromatic light in order to strip the substrate over an indented surface, wherein the exposure conditions ... restrict the indented surface to simple abrasion". (emphasis added). After the exposure sequence, a particle projection sequence is performed according to claim 1 for "projecting ... particles ... in a targeted fashion into the indented surface", i.e. into the indented surface caused by "abrasion" in the exposure sequence.

The term "abrasion" is defined as "(1) a scraping or rubbing off, as of skin, (2) a wearing away by rubbing or scraping, as of rock by wind, water, etc., (3) an abraded spot or area". Webster's New World College Dictionary, 3rd Edition, 1997.

Turning now to the Office Action, the Examiner has requested that page 1, line 5 of the specification be amended to reflect that application No. 09/857,062 has issued as U.S. Patent No. 6,638,440. This has been amended as shown above.

Turning now to the rejections to the claims, the Examiner has rejected claims 1-6 under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 4,299,860 (Schaefer et al.). The Examiner has also rejected claims 1-8 under the judicially created doctrine of double patenting in view of co-owned U.S. Patent No. 6,638,440.

Turning first to the rejection based on Schaefer et al., the Examiner states that Schaefer et al. anticipates claim 1 of the subject application because Schaefer et al. discloses a process wherein a substrate is exposed to a laser beam "in order to form a melted or shallow pool pattern-wise on the upper surface of the substrate". The Schaefer method then includes the step of injecting particles for depositing them "on the pool or in the melted area through the a nozzle". See, section 4, pages 2-3 of the Office Action.

The Schaefer reference is titled "Surface Hardening by Particle Injection into Laser Melted Surface". According to Schaefer, a laser beam is used "which melts a localized area progressively by passes of controlled depth and width across the surface" of a substrate. Thereafter, small particles are "propelled at high velocity ... into the melt pool". See Col. 2, lines 5-12. According to Schaefer, a "laser beam 14 making a pass across the substrate melts a pool 16 only momentarily. The pool freezes in a fraction of a second, but prior thereto the hard particles have been injected." (Col. 3, lines 37-41). As should be clear from the foregoing, and as the Examiner confirms in the

Office Action, Schaefer uses a laser beam to melt the surface region of a substrate whereupon particles can, thereafter, be propelled at high velocity into the melt pool.

The common use of the term “melt”, and the one recognized by those of ordinary skill in the art, is “to change from a solid to a liquid state, generally by heat.” See Webster’s New World College Dictionary, 3rd Edition, 1997. Melting is not abrasion. In fact, melting is the opposite of abrasion, especially in the context of the Schaefer et al. reference, because heat from the laser is used to soften the substrate and create a pool in a region of the substrate through which particles are propelled.

In contrast, claim 1 recites that the exposure conditions of the substrate to the coherent monochromatic light are set in order “to restrict said indented surface to simple abrasion”. For at least this reason, it is respectfully submitted that independent claim 1 is neither anticipated, nor rendered obvious by Schaefer et al. Accordingly, it is also believed that claims 2-6 depending from claim 1 are also believed to be allowable.

Claims 7-8 have not been rejected under Schaefer et al. However, those claims, along with claims 1-6 stand rejected under the judicially created doctrine of double patenting. In response, applicant has submitted herewith a Terminal Disclaimer so that any patent issuing from the subject application will expire on the same date as commonly-owned U.S. Patent No. 6,638,440.

In view of the foregoing, it is believed that all claims are now in condition for immediate allowance.

Application No.: 10/650,575
Amendment Dated January 30, 2006
Reply to Office Action of October 28, 2005
Page 9 of 9

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 02-1666.

Respectfully submitted,

Dated: January 27, 2006

By:

A handwritten signature in dark ink, appearing to read "David M. Fortunato", is written over a horizontal line.

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